

REMARKSArt rejection - US 5,880,561 (hereinafter "Miyazaki")

To the extent that the rejection over Miyazaki might be maintained against amended claims
5 1 and 13, reconsideration is requested because Miyazaki clearly teaches that in all embodiments the
carrier frequency (the higher frequency) is the frequency selected which produces arc straightening.
To the contrary, in the instant claims it is the lower, modulating frequency or sweep which is
selected to produce arc straightening.

Arc straightening is discussed at length in instant paragraphs 0004 and 0005. It is clear
10 that the frequencies which produce this effect are generally below 50 kHz, and therefore do not
suggest a VHF signal. On the other hand, the advantage of using a VHF carrier frequency which
keeps the arc stable are pointed out in paragraph 0002.

More particularly, Miyazaki teaches generating a first wave signal which excites an arc
straightening mode, and modulating to change polarity at a lower modulating frequency (col. 2,
15 lines 39-49). Where frequency alternation is taught, the first wave signal is the one which produces
arc straightening, and it is alternated with a lower frequency signal.

Accordingly it is clear that nothing in Miyazaki teaches nor at all suggests use of an arc
straightening signal to modulate or be mixed with a higher frequency carrier signal.

CONCLUSION

20 All formal objections to the claims are corrected. Claims 5, 9, 12 and 17, indicated as
containing allowable subject matter, have been amended to be in independent form, including all
the limitations of the claims from which they depended. Accordingly they are allowable.

Further, claims 1 and 13 have been shown to be patentable.

Respectfully submitted,

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